

Headwaters Basin

(Florence, Forest, Langlade, Lincoln, Oneida, and Vilas Cos.)

Forest, Christmas, and Ornamental Tree Disease and Pest Update

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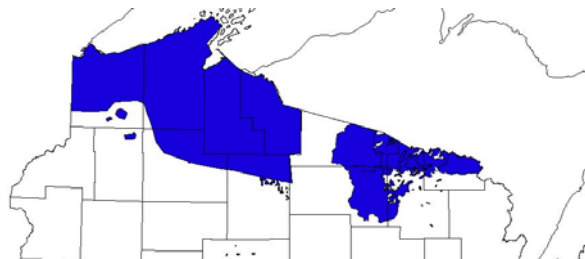
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Forest tent caterpillars – forecast for this spring

Areas defoliated by forest tent caterpillars in 2002

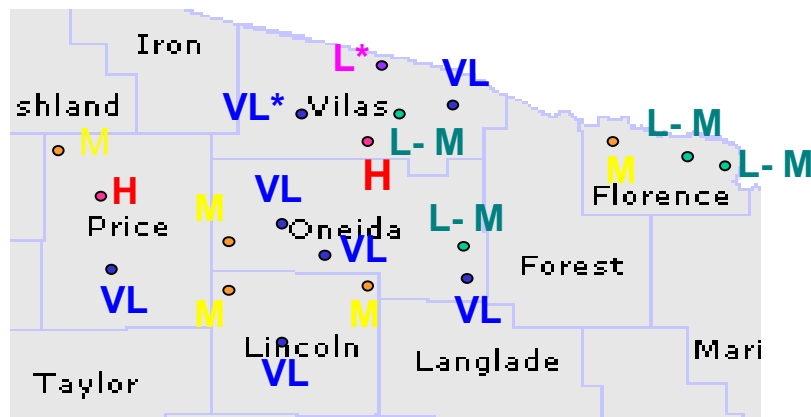
Last summer, it appeared that there were more complaints and media coverage about friendly flies than forest tent caterpillars. That's actually very encouraging to us. History tells us that by the final stage of forest tent caterpillar outbreaks, people start complaining more about this friendly insect than caterpillars.



What should we expect for this spring? Overwintering egg mass surveys were conducted in Florence, Lincoln, Oneida, Price, and Vilas Counties this winter. Two dominant or co-dominant aspen trees were cut for each site to count the number of forest tent caterpillar egg masses laid on the trees. This survey provides us with predicted levels of defoliation by the forest tent caterpillar at a particular site for this coming spring. Eggmass counts were much lower than that of previous years in most of the sites. Only two sites, west of Eagle River and north of Phillips had high enough counts to predict a heavy defoliation. In many sites, only a few eggmasses were found per tree (these sites are labeled as VL). Based on the survey results and an enormous number of parasitic flies we had last summer, we expect that the defoliation caused by the forest tent caterpillar will be much less severe and much less widespread, with some isolated areas of moderate to heavy defoliation.

I would like to thank Lincoln, Oneida, Price, and Vilas Counties, Plum Creek, Florence school forest, and US Forest Service for allowing us to conduct this survey in their forests. I thank Dr. William Kearby for sharing his survey results with me (his results are labeled with *). I also would like to thank Vilas County foresters (Jim Jefferson and John Gagnon), Jim Baughman, Renae Essenmacher, Stu Boren, and Henry Sullivan for finding survey sites and/or helping collecting egg masses. My special thanks go to Vilas Co. Forest Administrator; Larry Stevens, and DNR forester/forestry technicians; Scott Leonhardt, Rich Windmoeller, and Jim Lachapell for all their help, especially cutting down trees for me. You all are excellent sawyers!

Predicted levels of defoliation by the forest tent caterpillar in 2003, based on the overwintering eggmass surveys



VL=Very Light L=Light
L-M=Light to Moderate M=Moderate
H=Heavy
*= Surveys conducted by Dr. Kearby

Definitions

Light = No trees exhibit complete defoliation. Feeding damage is confined to the top of aspen crowns

Moderate = The occasional aspen may be completely defoliated, however most have tops partially defoliated (thinned)

Heavy = Aspen trees completely defoliated with feeding damage present to other species

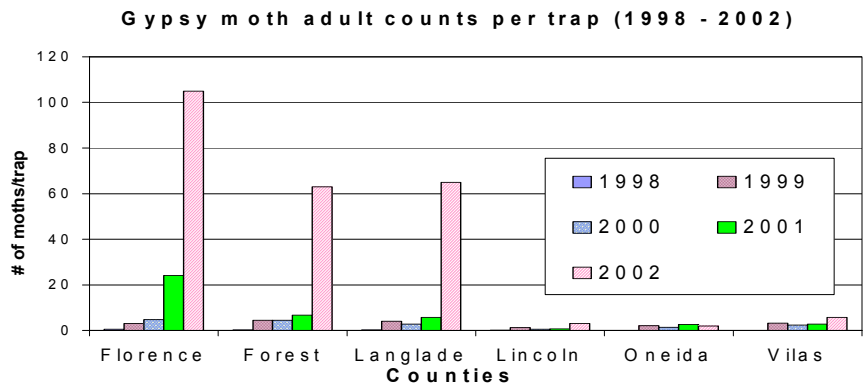
(From "Sampling Methods for Forest and Shade Tree Insects of North America" FHTET-2001-01; page 75)

2002 Gypsy moth adult trap catch results and forecast for this spring

A record total of 626,851 moths were caught in Wisconsin in 2002. The numbers continued to increase in many counties, especially in the northeastern part of the state, such as Door, Oconto, and Marinette Counties. In the Headwaters Basin, the moth number more than tripled last year in Florence, Forest, Langlade, and Lincoln Counties, compared to the previous year, with 10 times higher counts in Langlade County. Only in Oneida County, the trap-catch number slightly dropped. The dramatic increase in the moth numbers in Florence, Forest, and Langlade Counties are partially due to the cessation of STS (Slow The Spread) spraying, but more likely due to expansion of the general infestation. Slight decrease seen in Oneida County may be partially due to pheromone flake applications scattered throughout Oneida County last summer. In general, once average trap-catch number exceeds 10 moths/trap throughout a county, the county will be considered "generally infested", and it becomes quarantined. Currently in the Headwaters Basin, Florence, Forest, and Langlade Counties are under quarantine, and Vilas, Oneida, and Lincoln Counties are not yet quarantined.

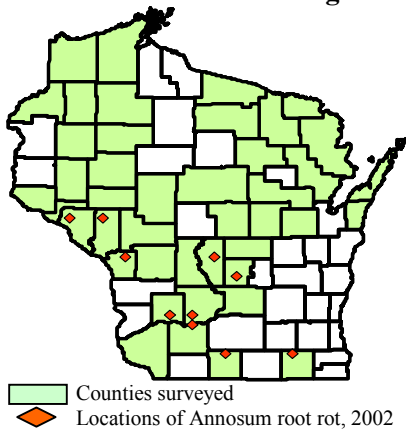
Last year, a small patch of heavy defoliation was observed in Florence County, south of Spread Eagle. In 2003, defoliation in Florence County is predicted to be much larger.

Counties with heavy infestations (>500 egg masses/acre and >20 acres) can participate in the DNR gypsy moth suppression program. This year's spraying costs \$20-24/acre depending on the insecticide to be used, and cost sharing of up to 50% is available.



Although two spray blocks in eastern Florence County (450 acres) were originally scheduled to be sprayed this spring under the suppression program, the Town of Florence recently made a decision not to pursue spraying for this year. A heavy defoliation by the gypsy moth is expected in these areas this spring. For more information about the gypsy moth suppression program, please visit the DNR website at <http://www.dnr.state.wi.us/org/land/forestry/fh/GM/index.htm> or call Bill McNee, Gypsy Moth Suppression Coordinator in Green Bay @ 920-492-5930. (This section was edited by Bill McNee. Thank you, Bill!)

Annosum Root Rot management recommendations in the Headwaters Basin



Annosum Root Rot, first identified in Wisconsin in 1993, has been observed in 10 Counties (Adams, Buffalo, Green, Iowa, La Crosse, Marquette, Richland, Sauk, Trempealeau, and Walworth Cos.), all in southern Wisconsin. Annosum root rot is caused by a fungus, *Heterobasidion annosum*. It causes reduced growth, decay, and tree mortality. It is considered one of the most damaging diseases of conifer in many temperate regions of the world. Discovery of rather widespread infection in southern Wisconsin, based on last year's statewide survey, led to a strategy change against this disease from "eradication" to "management", and recently management recommendations have been revised.

What should a forester in the Headwaters Basin do to prevent pine plantations from developing this disease? Although this disease has not been confirmed in northern Wisconsin yet, at this moment, we cannot exclude the possibility that this disease exists but has not been found yet.

There are many questions yet to be answered about this disease in Wisconsin; i.e. how this disease became established in Wisconsin, how extensively this disease exists, and how fast this disease is spreading. In the meantime, it has been decided to take a "better safe than sorry" precautionary approach to minimize the possible damage to Wisconsin's pine stands. Therefore, in a stand where this disease has not been found, which is the entire Headwaters Basin, it is recommended that freshly cut stumps be treated with sodium tetraborate decahydrate (Brand name: Sporax) within 24 hours of cutting during thinning. This recommendation applies to red, jack, & white pine and white spruce stands. Sporax will prevent fresh cut stumps from being exposed to fungal spores and infected with Annosum root rot. One pound of Sporax will cover 50 ft² of stump surfaces (260 trees of 6-inch d.b.h). Sporax can be purchased from Wilbur-Ellis Company (att: Sandie Mitchell) at 916-991-9846. A 25-lb bag costs \$56.25.

A new booklet titled "Annosum Root Rot and Red Pine Pocket Decline in Wisconsin" will be sent to foresters in the Headwaters Basin as soon as it becomes available. More information about Annosum Root Rot is available through the WI DNR FHP web site at <http://www.dnr.state.wi.us/org/land/forestry/fh/fhissues/annosum.htm>. (This section was reviewed by Jane Cummings-Carlson, DNR statewide forest pathologist. Thank you, Jane!)

Mortality on eastern hemlock

Mortality of mature hemlock trees was observed in eastern Oneida County (mainly from Sugar Camp to Three Lakes). Infestations by the hemlock borer (*Melanophila fulvoguttata*) were found on dying and dead hemlock trees. The insect is considered a secondary pest, and usually attacks weakened, dying, or recently killed trees. Infested trees show thinning and fading on their upper crown and dieback progresses downward. Infested trees are often seen with woodpecker damage as woodpeckers search for hemlock borer larvae. A windstorm in excess of 50 miles per hour hit the area on August 14, 2000. Blown down trees were left on site in the areas where hemlock mortality was observed. It is suspected that the windstorm, and dry and hot July in 2001 helped develop the populations of this insect. More information about the hemlock borer is available from the USDA FS website at <http://www.fs.fed.us/na/morgantown/fhp/palerts/hborer/hborer.htm>.

If you have any questions or need more information about the topics presented here, please feel free to contact Kyoko Scanlon at (715) 365-8934 or Kyoko.Scanlon@dnr.state.wi.us.